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AEROSOL IN THE VICARIOUS CALIBRATION OF MERIS

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We demonstrate the influence of the atmospheric aerosol loading in observations obtained by MERIS. The Medium Resolution Imaging Spectrometer (MERIS) is a nadir-looking push-broom spectrometer aboard ESA's Envisat satellite. It is recording fifteen programmable spectral bands in the wavelength range of 390 nm–1040 nm. Spatial resolutions of 250 m and 1 km can be selected. The instrument aims at the observation of Earth's surface properties. The atmospheric aerosol loading is also seen clearly in the observations. Thus aerosol parameters can be derived and used for the atmospheric correction of the data. Ground-based observations of the spectral surface reflectance and the atmospheric aerosol extinction have been obtained in North America for the vicarious calibration of MERIS. We present MERIS scenes with various atmospheric aerosol situations and compare the atmospherically corrected data and retrieved aerosol optical depths to the ground-based data.